

## Abstract

A method for synthesizing a pentafluorophenyl acrylate polymer includes bulk polymerizing a pentafluorophenyl acrylate monomer in the presence of a free radical initiator. The reactant mixture was subjected to an ultrasonication treatment, so that the mixing of the initiator and the monomer is enhanced; carried out the bulk polymerization at 25-99°C for a period of time, and at 100-200°C under a vacuum pressure for another period of time to complete the bulk polymerization, so that residue amounts of the initiator, unreacted monomer and oligomer of the monomer are reduced in the resulting reaction mixture.